

CONSUMPTION OF ALCOHOL AND TOBACCO BY WOMEN AND THE OCCURRENCE OF VIOLENCE BY INTIMATE PARTNER

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ABSTRACT

Objective: to analyze the consumption of alcohol and tobacco by women and the occurrence of intimate partner violence against women.

Method: a cross-sectional and analytical study with 369 women in the age group of 20 to 59 years, attended in Basic Health Units of five municipalities of Piauí, Brazil. The instruments used in data collection were Alcohol Use Disorders Identification Test, Non-Student Drugs Use Questionnaire and Revised Conflict Tactics Scales. Data were analyzed according to descriptive statistics and bivariate analysis with Pearson's chi-square test and logistic regression.

Results: the overall prevalence of intimate partner violence against women was 64.0%, 61.5% of whom were victims of psychological aggression, 33.6% of physical abuse and 17.1% of sexual coercion. In addition, 50.1% and 17.9% of the women reported alcohol and tobacco consumption, respectively, which were statistically associated with the occurrence of intimate partner violence. Alcohol consumption increased by 2.15 times the chance of intimate partner raping ($p=0.001$, 95% CI=1.37-3.38), while smoking increased this chance by 2.04 times ($p=0.038$, 95% CI=1.04-4.00).

Conclusion: high prevalence of alcohol and tobacco use by women and intimate partner violence were identified. In addition, it was found that the consumption of these substances by women is a risk factor associated with the occurrence of intimate partner violence in the female universe.

DESCRIPTORS: Alcoholism. Tobacco use disorder. Women. Violence against women. Intimate partner violence. Health vulnerability. Gender and health.

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CONSUMO DE ÁLCOOL E TABACO POR MULHERES E A OCORRÊNCIA DE VIOLÊNCIA POR PARCEIRO ÍNTIMO

RESUMO

Objetivo: analisar o consumo de álcool e tabaco por mulheres e a ocorrência de violência por parceiro íntimo contra a mulher.

Método: estudo transversal e analítico, realizado com 369 mulheres na faixa etária de 20 a 59 anos, atendidas em Unidades Básicas de Saúde de cinco municípios piauienses. Os instrumentos utilizados na coleta de dados foram *Alcohol Use Disorders Identification Test*, *Non-Student Drugs Use Questionnaire* e *Revised Conflict Tactics Scales*. Os dados foram analisados segundo estatística descritiva e análise bivariada com teste qui-quadrado de Pearson e regressão logística.

Resultados: a prevalência global de violência por parceiro íntimo contra a mulher foi de 64,0%, sendo que 61,5% da amostra foi vítima de agressão psicológica, 33,6% de abuso físico e 17,1% de coerção sexual. Ademais, 50,1% e 17,9% das mulheres referiram o consumo de álcool e de tabaco, respectivamente, os quais se associaram estatisticamente à ocorrência de violência por parceiro íntimo. O consumo de álcool aumentou em 2,15 vezes a chance da mulher ser violentada pelo parceiro íntimo ($p=0,001$; IC 95%=1,37-3,38), enquanto o consumo de tabaco aumentou tal chance em 2,04 vezes ($p=0,038$; IC 95%=1,04-4,00).

Conclusão: foram identificadas elevadas prevalências de consumo de álcool e tabaco por mulheres e de violência por parceiro íntimo. Além disso, constatou-se que o consumo dessas substâncias por mulheres figura como fator de risco associado à ocorrência de violência por parceiro íntimo no universo feminino.

DESCRITORES: Alcoolismo. Tabagismo. Mulheres. Violência contra a mulher. Violência por parceiro íntimo. Vulnerabilidade em saúde. Gênero e saúde.

CONSUMO DE ALCOHOL Y TABACO POR MUJERES Y LA OCURRENCIA DE VIOLENCIA POR COMPAÑERO ÍNTIMO

RESUMEN

Objetivo: analizar el consumo de alcohol y tabaco por mujeres y la ocurrencia de violencia por compañero íntimo contra la mujer.

Método: estudio transversal y analítico, realizado con 369 mujeres en el grupo de edad de 20 a 59 años, atendidas en Unidades Básicas de Salud de cinco municipios piauienses. Los instrumentos utilizados en la recolección de datos fueron: *Alcohol Use Disorders Identification Test*, *No-Student Drugs Use Questionnaire* y *Revised Conflict Tactics Scales*. Los datos fueron analizados según estadística descriptiva y análisis bivariado con prueba qui-cuadrada de Pearson y regresión logística.

Resultados: la prevalencia global de violencia por compañero íntimo contra la mujer fue del 64,0%, siendo que el 61,5% de la muestra fue víctima de agresión psicológica, el 33,6% de abuso físico y el 17,1% de la coerción sexual. Además, el 50,1% y el 17,9% de las mujeres refirieron el consumo de alcohol y tabaco, respectivamente, los cuales se asociaron estadísticamente a la ocurrencia de violencia por compañero íntimo. El consumo de alcohol aumentó en 2,15 veces la probabilidad de que la mujer fuera violada por el compañero íntimo ($p=0,001$, IC 95%=1,37-3,38), mientras que el consumo de tabaco aumentó tal posibilidad en 2,04 veces ($p=0,038$, IC 95%=1,04-4,00).

Conclusión: se identificaron elevadas prevalencias de consumo de alcohol y tabaco por mujeres y de violencia por compañero íntimo. Además, se constató que el consumo de esas sustancias por

mujeres figura como factor de riesgo asociado a la ocurrencia de violencia por compañero íntimo en el universo femenino.

DESCRITORES: Alcoholismo. Tabaquismo. Mujeres. Violencia contra la mujer. Violencia de pareja. Vulnerabilidad en salud. Género y salud

INTRODUCTION

The consumption of alcohol and tobacco has a differentiated connotation of the other drugs in society, since the legal character, facilitated access and low cost of these substances result in social acceptance and make difficult their confrontation.¹ In this way, alcohol and tobacco are global problems, the negative effects of which are due not only to public health but also to safety, justice, the economy and social security.²⁻³

According to the World Health Organization, 65% of men and 45% of women consume alcohol in the world.⁴ In Brazil, the prevalence of harmful alcohol consumption is 13.7%, with emphasis on the Midwest (16.2%) and Northeast (15.6%). In this scenario, Teresina presents itself as the second northeastern capital with the highest percentage of harmful alcohol consumption (19.4%), being 28% among men and 8.9% among women.⁵

As for smoking, a North American study conducted in 2015 estimated that 15.1% of adults were smokers, 16.7% were male and 13.6% female.⁶ National survey found that the percentage of Brazilian adult smokers in the same year was 10.4% (12.8% in males and 8.3% in females). In Teresina, 7.3% of adults were smokers, 10.3% among men and 5.4% among women.⁵

According to the II National Survey of Alcohol and Drugs, conducted in 2012 in the five Brazilian regions, alcohol and tobacco have the highest prevalence of consumption among psychoactive substances (50% and 16.9%, respectively) and figure as important risk factors for morbidity, mortality and disability in the population.⁷

Although the consumption of psychoactive substances is a phenomenon historically associated with men, there has been a decrease in the gap between genders, especially in the young population.⁸⁻⁹ In this context, economic development and changes in gender roles in contemporary society, coupled with double working hours, difficulties in dealing with daily problems and greater susceptibility of women to the development of mental disorders, are factors that contribute to the initiation and consumption of psychoactive substances in the female population.¹⁰⁻¹¹

In this way, the harmful consumption of alcohol and tobacco is characterized as a complex situation and with multiple determinants that change according to culture, historical moment and social group. These substances are responsible for numerous social, psychological and biological damages, as well as other negative implications for the lives of women, among which is the exposure of these to situations of intimate partner violence.¹²⁻¹⁵

Intimate partner violence is defined as any behavior within an intimate relationship that causes physical, sexual, or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse, and controlling behaviors.¹⁶ It is a multidimensional public health problem, which has high global prevalence and affects mainly women.¹⁶⁻¹⁷

Research carried out on different continents found that the prevalence of intimate partner violence against women was 11.9% in Saudi Arabia, 25.4% in Australia, 28.0% in Sweden and 69.0% in Ghana.¹⁸⁻²¹ In Brazil, investigations carried out in Basic Health Units in the Southeast and Northeast regions showed that 55.7% of the women from São Paulo and 39.0% of the Paraíba women were victims of intimate partner violence.²²⁻²³

In addition, the women were victims of intimate partner violence against women covers a wide range of violent acts ranging from verbal aggression and other forms of emotional abuse to femicide. However, non-fatal cases are still marked by invisibility, since they occur mainly in the home and, in large part, do not generate care and notifications in the health services.²⁴⁻²⁵

In view of the above, the objective of this study was to analyze the consumption of alcohol and tobacco by women and the occurrence of intimate partner violence against women.

METHOD

A cross-sectional, exploratory and analytical study, related to the project "Violence, alcohol consumption and drugs in the female universe: prevalence, risk factors and consequences for mental health", carried out in 72 Basic Health Units located in the municipalities of Teresina, Parnaíba, Picos, Floriano and Bom Jesus, which are the headquarters of the five macro-regions of health of the State of Piauí, Brazil.

The population was composed of women in the age group of 20 to 59 years old, living in the municipalities, totaling 347,414 women.²⁶ After using the presumed prevalence of alcohol consumption among adult women of 39%,⁷ confidence level of 95% and maximum error of 5%, a sample of 369 women was obtained.

Proportional stratification was used to determine the number of women in each municipality, resulting in 232 women in Teresina, 36 in Parnaíba, 46 in Picos, 38 in Floriano and 17 in Bom Jesus. In addition, the same prevalence of 39% of alcohol consumption among adult women was applied, followed by random lottery, to define the number and the Basic Health Units that would be inserted in the study.

Finally, to define the number of women interviewed in the selected Basic Health Units, a stratified proportional sample was also used, considering the number of women attended at each Basic Health Unit in 2014.

We included women who had an intimate partner and who were attended in nursing consultations in the Basic Health Units of the selected municipalities. As an exclusion criterion, the presence of verbal communication difficulties was considered, since the data collection would be done through a dialogue with the interviewees. It is emphasized that they were considered intimate partners, the companions or ex-companions, regardless of the formal union, and the current boyfriends.²⁷

As for the instruments, in addition to a structured form with questions related to the socioeconomic aspects of the sample, the Alcohol Use Disorders Identification Test (AUDIT) for the evaluation of alcohol consumption, the Non-Student Drugs Use Questionnaire (NSDUQ) for the investigation of tobacco use and the Revised Conflict Tactics Scales (CTS2) to predict the occurrence of intimate partner violence against women, in their different natures and severities.

The AUDIT was developed by the World Health Organization²⁸ and validated in Brazil by Mendez.²⁹ It proposes a simple method for the tracking of alcohol consumption and is composed of ten questions, each with a margin of 0 to 4 points.²⁸ The prevalence of alcohol consumption was detected through the first issue of the AUDIT (How often do you consume alcohol?). Thus, the value "0" (no) was attributed when the interviewee reported never having consumed alcoholic beverages (option 0) and "1" (yes) when consumption was positive at some frequency (options 1 to 4).

The NSDUQ is of American origin³⁰ and was validated for use in Brazil by Hasselmann, Lopes and Reichenheim.³¹ It addresses the consumption of tobacco and other drugs by both the respondent and his or her current partner, and the positive response in an issue identifies the consumption of that substance.³⁰ In this research, only the first part of the instrument was used, referring to the smoking of the women interviewed (yes or no).

The CTS2 were prepared by Straus and co-workers³² and had their cultural adaptation and validation for Brazil carried out by Moraes, Hasselmann and Reichenheim.³³ They are composed of five scales: three of them deal with the occurrence of psychological aggression, physical abuse and sexual coercion, while the other two question the physical consequences of violence on individual health (injuries) and the tactics of conflict resolution through negotiation. They present 39 items grouped in pairs of questions regarding the actions of the respondent and, reciprocally, of their companion, which makes a total of 78 questions.³²

In addition, they identify the frequency of occurrence of violent acts, which includes eight categories. The first six are intended to determine prevalence in the last three months: (1) once, (2) twice, (3) 3-5 times, (4) 6-10 times, (5) 11-20 times, (6) more than 20 times. The other two categories are designed to determine: global prevalence, (7) has occurred before; and the absence of such abuse; (8) never happened. In the present study, we opted to evaluate the global prevalence, assigning the value 1 (occurred at some point) to all response categories from 1 to 7 and the value 0 (never occurred) to category 8.³⁴

Data collection took place from August 2015 to March 2016 and was conducted through an individual interview, in a space reserved in the Basic Health Units. In order to detect possible difficulties in the understanding of the socioeconomic form by the potential participants, a pre-test was performed with 10% of the sample in Basic Health Units that had not been selected from the sampling process. The analysis of the tests allowed to identify that the instrument did not need changes in its writing or structure.

The data obtained was coded and organized into Microsoft Excel 2010 spreadsheets through a double-digit process. Subsequently, the data was exported to the Statistical Package for the Social Science (SPSS), version 22.0, in which the statistical analysis was performed.

Descriptive statistics were performed by determining the measures of central tendency and dispersion. Bivariate analyzes were conducted to evaluate the association between the independent variables (alcohol consumption and smoking by women) and the dependent variable (intimate partner violence against women). Because they were categorical variables, Pearson's chi-square test was used.

The independent variables that obtained a p-value ≤ 0.02 in the bivariate analyzes made up the binary logistic regression model, with the respective p-values, odds ratio and confidence intervals. It should be emphasized that for all analyzes performed, a significance level of 5% and a 95% confidence interval were adopted.

RESULTS

The mean age of the sample was 33.1 years, with a predominance of women aged between 20 and 39 years (75.1%), browns (59.6%), heterosexuals (98.6%) and married or in a stable union (71.8%). In addition, 81.8% of the sample had eight years or more of schooling and 69.7% had monthly income less than or equal to two minimum wages (Table 1).

The overall prevalence of intimate partner violence against women was 64.0% (n=236). When considering the nature of violent action, it was detected that 61.5% of the women were victims of psychological aggression, 33.6% of physical abuse and 17.1% of sexual coercion, while the prevalence of injuries was 16.0%. Concerning severity, it was observed that the occurrence of minor violence was superior to that of severe violence (Table 2).

Table 1 - Socioeconomic and demographic characterization of the sample.
Teresina, PI, Brazil, 2016. (n=369)

Variables	n	%	\bar{x} †	\pm ‡	CI 95%§	Min-Max
Age group			33.1	9.9	32.1-34.1	20-59
20-39 years old	277	75.1				
40-59 years old	92	24.9				
Color/race						
Brown-skinned	220	59.6				
Caucasian	72	19.5				
Black	68	18.4				
Asian	6	1.6				
Indigenous	3	0.8				
Sexual orientation						
Heterosexual	364	98.6				
Homosexual	4	1.1				
Bisexual	1	0.3				
Marital status						
Single	82	22.2				
Married/stable marriage	265	71.8				
Divorced	14	3.8				
Widow	8	2.2				
With children						
Yes	261	70.7				
No	108	29.3				
Schooling		10.0	3.5	9.8-10.6	0-20	
None	14	3.8				
< 8 years	53	14.4				
≥ 8 years	302	81.8				
Income*			799.8	637	722-877	0-5000
None	93	25.2				
≤ 2 minimum wages	257	69.7				
> 2 minimum wages	19	5.1				

*The minimum reference wage was the data collection period (R\$ 788.00); †= mean; ‡ ±= standard deviation; §CI 95%= confidence interval; Min-Max= minimum and maximum.

The prevalence of alcohol consumption in the sample was 50.1% (n=185) and the prevalence of smoking was 17.9% (n=66) (Figure 1). It is noteworthy that 132 women reported consuming only alcohol (35.7%), 13 of them reported consuming only tobacco (3.5%) and 53 consumed both alcohol and tobacco (14.4%).

The bivariate analysis between the independent categorical variables and the dependent variable showed that there is a statistically significant association between the consumption of alcohol ($p < 0.001$) and tobacco ($p = 0.001$) by women and the occurrence of intimate partner violence against women (Table 3).

The binary logistic regression model confirmed that both alcohol consumption and smoking by women were statistically associated with the occurrence of intimate partner violence against women. It was identified that alcohol consumption increased by 2.15 times the chance of women being intimate partner violence, while tobacco use increased by 2.04 times (Table 4).

Table 2 - Prevalence of intimate partner violence against women, according to the nature and severity of violent action. Teresina, PI, Brazil, 2016. (n=369)

Nature of violence*	n	%
Psychological aggression	227	61.5
Minor	224	60.7
Severe	153	41.5
Physical abuse	124	33.6
Minor	118	32.0
Severe	59	16.0
Sexual coercion	63	17.1
Minor	50	13.6
Severe	23	6.2
Injury	59	16.0
Minor	54	14.6
Severe	26	7.0

*Multiple answers.

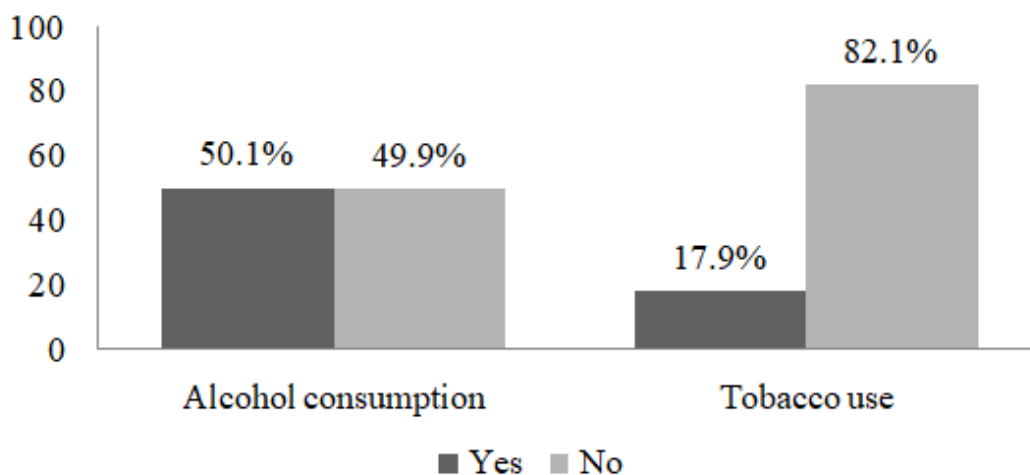


Figure 1 - Prevalence of alcohol and tobacco consumption in the sample. Teresina, PI, Brazil, 2016. (n=369)

Table 3 - Bivariate analysis between independent categorical variables (alcohol consumption and smoking by women) and the dependent variable (intimate partner violence against women). Teresina, PI, Brazil, 2016. (n=369)

Independent variables	Intimate partner violence				OR*	CI 95%†	p-value‡
	Yes		No				
	n	%	n	%			
Alcohol consumption					2.45	1.58-3.80	<0.001
Yes	137	74.1	48	25.9			
No	99	53.8	85	46.2			
Tobacco use					2.99	1.54-5.83	0.001
Yes	54	81.8	12	18.2			
No	182	60.1	121	39.9			

*OR= odds ratio; †CI= confidence interval; ‡Pearson's chi-square test.

Table 4 - Logistic regression involving alcohol consumption and smoking by women in the face of intimate partner violence against women. Teresina, PI, Brazil, 2016. (n=369)

Independent variables	OR*	CI 95%†	p-value
Alcohol consumption	2.15	1.37-3.38	0.001
Tobacco use	2.04	1.04-4.00	0.038

*OR= odds ratio; †CI=confidence interval

DISCUSSION

Although the scientific literature evidences the existence of an association between psychoactive substance use and intimate partner violence against women, the debates about the consumption of these substances by women who are violated are still incipient, since a large part of the studies an intimate male partner and one who practices violent acts.³⁵⁻³⁶

In addition, the possible underreporting of intimate partner violence against women in different health services, as well as the lack of verification of their main associated factors, makes it feasible to conduct research that explores such problems in the community context, which favors the detection of violent acts and possible risk factors pertinent to the daily life of women.

Intimate partner violence against women was identified in 64.0% of the women interviewed, a high percentage when compared to results from other Northeastern capitals. In Recife and João Pessoa, it was detected that the prevalence of intimate partner violence among women enrolled in the Family Health Strategy was 24.4% and 39.0%, respectively.^{22,37} However, a similar result was observed among 661 women attending health services in the public network of São Paulo, since 60.9% of them were victims of intimate partner violence.¹⁷

In the international scenario, the percentage of intimate partner violence against women also was mostly lower. On the African continent, investigations found that 53.6% of women in Côte d'Ivoire, 43.7% in Uganda and 42.0% in Nigeria were victims of intimate partner violence.³⁸⁻⁴⁰ However, the lowest prevalence were found in the European and Asian continents. In Norway, 13.5% of women reported intimate partner violence, while in Saudi Arabia the prevalence was 11.9%.^{18,41}

On the other hand, research developed with a sample of Ghanaian women showed a prevalence of intimate partner violence against women higher than that found in the five Piauí counties investigated. Of the 443 women interviewed, 306 (69.0%) had experienced intimate partner violence of some kind, and 62%, 34% and 27% of them suffered psychological, sexual and physical violence in that order.²¹

Although the present study also identified a predominance of psychological aggression (61.5%), it contrasts with the results found in Ghana, since there was a higher prevalence of physical abuse (33.6%) than of sexual coercion (17.1%). Similar results were observed in the state of São Paulo, where the prevalence of intimate partner psychological, physical and sexual violence was 53.8%, 32.2% and 12.4%, respectively.²³

As for the nature of violent actions, high percentages were also identified in Iran, where 79.7% of women were victims of intimate partner violence, 60.0% intimate partner violence, and 32.9% intimate partner violence sexual.⁴² In Sweden, the prevalence of intimate partner violence against women was lower than in most publications: 25.0% psychological, 7.5% physical and 2.8% sexual.²⁰

Although it is often neglected by women's protection services and by health professionals, psychological aggression deserves attention, since it is usually the first form of violence in the context of a chain that can reach its peak, femicide.

It should be noted that intimate partner violence can result in a wide range of physical and mental health problems for women, including injuries (injuries), chronic pain, mental disorders (anxiety and depression, especially) and sleep disorders. In the present study, it was observed that 14.6% of women victims of intimate partner violence presented minor injuries and 7.0% of them reported severe injuries because of intimate partner physical abuse. This finding corroborates with those found in Sri Lanka, where 11.2% of women who were raped by the intimate partner developed severe injuries.⁴³

In addition, multicentric research conducted in more than 40 countries, located in five different continents, pointed out that there is a direct relationship between the severity of intimate partner physical violence and alcohol consumption, and the severity of intimate physical partner violence is greater when it involves the consumption of such substance, either only by the violated partner or by both involved in the violent action.⁴⁴

In this context, the national and international literature confirms the consumption of alcohol as one of the main risk factors for the occurrence of intimate partner violence against women.^{40-41,45} Results obtained in Spain showed a high prevalence of gender violence among women users of more than one substance of abuse, with alcohol being the main drug of consumption.⁴⁶

The factors that trigger the consumption of psychoactive substances by women are related to their individual characteristics, as well as to their sociocultural aspects, especially the early age group, low schooling, low insertion in the labor market, intrafamilial conflicts, weak affective bond and consumption drugs in the family environment or in groups of friends.⁴⁷

It was found that 50.1% of the women interviewed reported alcohol consumption, which represents a prevalence higher than that detected nationally. In a study carried out periodically in the five Brazilian regions, the prevalence of alcohol consumption among women in the last 12 months was 41.0% in 2006 and 38.0% in 2012.⁷

Similar results were observed in Puerto Ricans living in the United States, since 25.0% of them declared themselves to be former drinkers and 35.0% reported current consumption of alcoholic beverages, of which 27% were moderate drinkers and 8% heavy drinkers.⁴⁸

On the other hand, Russia presents itself with one of the countries with the highest prevalence of alcohol consumption in the female universe. Research conducted with Russian women of childbearing age found that 89.0% of them had consumed alcoholic beverages in the last three months, with 65.0% reporting consumption of four or more doses on a single occasion.⁴⁹

Regarding the consequences of such consumption in the female universe, the investigation of reports published in Brazilian magazines of national circulation about the social and health repercussions of women's drug use, highlighted their victimization in situations of intimate partner violence, as well as the increase of drug use by women, especially alcohol.⁵⁰

It should be noted that a statistically significant association was found between alcohol consumption by women and intimate partner violence against Piauí women, and 74.1% of women who reported alcohol consumption were victims of partner violence intimate.

Alcohol consumption can increase the tendency to violent and impulsive behaviors, including in the female universe, which can determine the occurrence of morbidities and mortalities due to violent causes. Thus, women become more susceptible to the development of conflicting relationships, which increases the likelihood of victimization in episodes of intimate partner violence.⁵¹

A study carried out from a representative household sample of all geographic regions in Brazil showed that alcohol consumption increased by 1.6 times the probability of victimization in cases of intimate partner violence.⁴⁵ This association was more significant in the present study, since alcohol consumption increased by 2.15 times the chance of women being victims of intimate partner violence. Thus, it is confirmed that alcohol consumption plays an important role in the occurrence of intimate partner violence.

In addition to the problem about alcohol, tobacco use among women is also a major public health problem.⁵² Even in the face of strong global policies to combat smoking and its successful results, female smoking still worries and deserves attention, especially in developed countries.

In Piauí women, the prevalence of tobacco use was 17.9%, higher than that found in a population-based household survey, involving 60,202 Brazilian individuals aged 18 years or over, which pointed out that 11.0% of women were current tobacco users.⁵³

Research involving women from 14 countries, located in different continents, aged 15-49, identified that current smoking among women of reproductive age ranged from 0.4% in Egypt to 30.8% in Russia. The prevalence was less than or equal to 2.3% in Bangladesh, China, India, Thailand and Vietnam and more than 10% in Brazil, Uruguay, Poland, Turkey and Ukraine.⁵⁴

Thus, the highest prevalence of female smoking is found in the European and American countries, while the African and Asian countries stand out because they present the lowest prevalence of smoking among women of childbearing age.

The literature also points out that female smoking also appears as a risk factor for the occurrence of intimate partner violence against women.^{14,55} Epidemiological survey conducted in a US adult sample (n=25,778) found that nicotine was the substance most commonly used by women who had been victims of intimate partner violence in the past year.⁵⁶

Smoking presents itself to deal with the stress of a conflict-damaged relationship. However, nicotine in tobacco may be related to intimate partner violence through behavioral changes, since women who smoke tobacco may become more impulsive, irritable, and likely to conflict with the intimate partner, which may increase the likelihood of intimate partner violence against women.⁵⁷

In the present study, 81.8% of women who reported smoking were victims of intimate partner violence. In addition, it was found that the chance of experiencing intimate partner violence increased by 2.04 times among smokers.

A similar result was observed in an urban community in the Northeast of the United States, from a sample of 123 women, aged 18 years or more and victims of violence by the current intimate partner. It was identified that 86% of the raped women consumed tobacco in the last three months, and 73% of them had a daily consumption pattern.⁵⁸

A survey of 21,162 women living in the United States on intimate partner violence and the risks associated with cardiovascular health found that 4975 women were victims of intimate partner

violence throughout their lives, and more than one-third of them reported smoking current, which resulted in a statistical association between the phenomena (OR=2,8).⁵⁹

Considering the above, the direct relationship between alcohol and tobacco consumption by women and their victimization in cases of intimate partner violence is noticed. When considering the adverse health consequences of these phenomena, there is a need for better coordination between prevention and support services for women, as well as the awareness of nurses and other health professionals on the issues, which must be constantly discussed health services.

However, a Brazilian study carried out in Rio Grande do Sul highlighted that the majority of nursing professionals working in health services who received victims of domestic violence were unaware of the need and obligation to report domestic and sexual violence, address the victim, identify cases of violence, adopt conduct and refer women to other services.⁶⁰ Thus, training and continuing education of nursing professionals who work in health institutions, including ethical and legal aspects in nursing care for victims of violence, becomes indispensable.

Regarding the limitation of the study, we highlight the use of the cross-sectional design, since it makes it impossible to define causality between alcohol consumption and smoking by women and the occurrence of intimate partner violence against women.

CONCLUSION

The results showed the existence of high prevalence of alcohol and tobacco consumption by women, as well as intimate partner violence against women, confirming such phenomena as public health problems of great magnitude and present in the daily lives of women in the municipalities of Piauí. In addition, they highlighted the consumption of alcohol and tobacco by women as a risk factor associated with the occurrence of violence by intimate partner in the female universe.

In view of the evident need to strengthen coordination between prevention and support services for women who consume alcohol and tobacco and who experience intimate partner violence, the above findings may contribute to the formulation of strategies that address such problems in the context of assistance comprehensive and humanized approach to women's health.

In addition, it is believed that the present study provides information that will support nurses and other health professionals about the preventive practice and management of cases of violence by intimate partner against women and their associated factors, in addition to influencing the conduct of other research and favoring the debates about the phenomena in different social spheres.

REFERENCES

1. Oliveira GC, Dell'Agnolo CM, Ballani TSL, Carvalho MDB, Pelloso SM. Consumo abusivo de álcool em mulheres. *Rev Gaúcha Enferm* [Internet]. 2012 Jun [cited 2017 Nov 12]; 33(2):60-8. Available from: <https://doi.org/10.1590/S1983-14472012000200010>
2. Sacks JJ, Gonzales KR, Bouchery EE, Tomedi LE, Brewer RD. 2010 National and State Costs of Excessive Alcohol Consumption. *Am J Prev Med* [Internet]. 2015 Nov [cited 2017 Nov 12]; 49(5):73-9. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/26477807>
3. Coutinho ESF, Bahia L, Barufaldi LA, Abreu GA, Malhão TA, Pepe CR, et al. Cost of diseases related to alcohol consumption in the Brazilian Unified Health System. *Rev Saúde Pública* [Internet]. 2016 June [cited 2017 Nov 12]; 50(28):1-8. Available from: <https://doi.org/10.1590/S1518-8787.2016050005741>
4. World Health Organization. Global status report on alcohol and health. Geneva: WHO; 2011.

5. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Vigitel Brasil 2015: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico. Brasília (DF): MS; 2016.
6. Jamal A, King BA, Neff LJ, Whitmill J, Babb SD, Graffunder CM. Current cigarette smoking among adults - United States, 2005–2015. *Morb Mortal Wkly Rep* [Internet]. 2016 Nov [cited 2017 Nov 12]; 65(44):1205-11. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27832052>
7. Laranjeira R, Madruga CS, Pinsky I, Caetano R, Mitsuhiko SS. II Levantamento Nacional de Álcool e Drogas (LENAD) – 2012. São Paulo: INPAD; UNIFESP; 2014.
8. López-Maldonado MC, Luis MAV, Gherardi-Donato ECS. Consumo de drogas lícitas en estudiantes de enfermería de una universidad privada en Bogotá, Colombia. *Rev Latino-Am Enfermagem* [Internet]. 2011 May-June [cited 2017 Nov 12]; 19(esp.):707-13. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-11692011000700007
9. Malta DC, Machado IE, Porto DL, Silva MMA, Freitas PC, Costa AWN, et al. Alcohol consumption among brazilian adolescents according to the National Adolescent School-based Health Survey (PeNSE 2012). *Rev Bras Epidemiol* [Internet]. 2014 [cited 2017 Nov 12]; 17(suppl. 1):203-14. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1415-790X2014000500203&lng=pt&nrm=iso&tlng=en
10. World Health Organization. Global status report on alcohol and health 2014. Geneva: WHO; 2014.
11. Vargas D, Soares J, Leon E, Pereira CF, Ponce TD. O primeiro contato com as drogas: análise do prontuário de mulheres atendidas em um serviço especializado. *Saúde Debate* [Internet]. 2015 Jul-Sept [cited 2017 Nov 13]; 39(106):782-91. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-11042015000300782&lng=en&nrm=iso&tlng=pt
12. Capaldi DM, Knoble NB, Shortt JW, Kim HK. A systematic review of risk factors for intimate partner violence. *Partner Abuse* [Internet] 2012 Apr [cited 2017 Nov 12]; 3(2):231-80. Available from: <https://doi.org/10.1891/1946-6560.3.2.231>
13. Umana JE, Fawole OI, Adeoye IA. Prevalence and correlates of intimate partner violence towards female students of the University of Ibadan, Nigeria. *BMC Womens Health* [Internet]. 2014 Dec [cited 2017 Nov 13]; 14(141):1-8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/25488683>
14. Caleyachetty R, Echouffo-Tcheuqui JB, Stephenson R, Muennig P. Intimate partner violence and current tobacco smoking in low - to middle - income countries: individual participant meta-analysis of 231,892 women of reproductive age. *Glob Public Health* [Internet]. 2014 Apr [cited 2017 Nov 13]; 9(5):570-8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/24773510>
15. Lindner SR, Coelho EBS, Bolsoni CC, Rojas PF, Boing AF. Prevalência de violência física por parceiro íntimo em homens e mulheres de Florianópolis, Santa Catarina, Brasil: estudo de base populacional. *Cad Saúde Pública* [Internet]. 2015 Apr [cited 2017 Nov 12]; 31(4):815-26. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0102-311X2015000400815
16. Organização Mundial da Saúde. Prevalência da violência sexual e da violência pelo parceiro íntimo contra a mulher: ação e produção de evidência. Washington: OMS; 2012.
17. Barros CRS, Schraiber LB. Intimate partner violence reported by female and male users of healthcare units. *Rev Saúde Pública* [Internet]. 2017 Feb [cited 2017 Nov 14]; 51:7-17. Available from: <https://doi.org/10.1590/s1518-8787.2017051006385>
18. Alzahrani TA, Abaalkhail BA, Ramadan IK. Prevalence of intimate partner violence and its associated risk factors among Saudi female patients attending the primary healthcare centers in Western Saudi Arabia. *Saudi Med J* [Internet]. 2016 Jan [cited 2017 Nov 13]; 37(1):96-9. Available from: <https://doi.org/10.15537/smj.2016.1.13135>
19. Dillon G, Hussain R, Kibele E, Rahman S, Loxton D. Influence of intimate partner violence on domestic relocation in metropolitan and non-metropolitan young Australian women. *Violence*

- Against Women [Internet]. 2016 Nov [cited 2017 Nov 13]; 22(13):1597-620. Available from: <https://doi.org/10.1177/1077801216628689>
20. Lövestad S, Löve J, Vaez M, Krantz G. Prevalence of intimate partner violence and its association with symptoms of depression; a cross-sectional study based on a female population sample in Sweden. *BMC Public Health* [Internet]. 2017 Apr [cited 2017 Nov 13]; 17(1):335-46. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28424072>
 21. Issahaku PA. Correlates of intimate partner violence in Ghana. *SAGE Open* [Internet]. 2017 Apr-June [cited 2017 Nov 13]; 1-14. Available from: <https://doi.org/10.1177/2158244017709861>
 22. Albuquerque JBC, César ESR, Silva VCL, Espínola LL, Azevedo EB, Ferreira Filha MO. Violência doméstica: características sociodemográficas de mulheres cadastradas em uma Unidade de Saúde da Família. *Rev Eletr Enf* [Internet]. 2013 Apr-June [cited 2017 Nov 13]; 15(2):382-90. Available from: <https://doi.org/10.5216/ree.v15i2.18941>
 23. Mathias AKRA, Bedone AJ, Osis MJD, Fernandes AMS. Prevalência da violência praticada por parceiro masculino entre mulheres usuárias da rede primária de saúde do Estado de São Paulo. *Rev Bras Ginecol Obstet* [Internet]. 2013 Apr [cited 2017 Nov 13]; 35(4):185-91. Available from: <https://doi.org/10.1590/S0100-72032013000400009>
 24. Garcia LP, Duarte EC, Freitas LRS, Silva GDM. Violência doméstica e familiar contra a mulher: estudo de casos e controles com vítimas atendidas em serviços de urgência e emergência. *Cad Saúde Pública* [Internet]. 2016 Apr [cited 2017 Nov 14]; 32(4):1-11. Available from: <https://doi.org/10.1590/0102-311X00011415>
 25. Guruge S, Ford-Gilboe M, Varcoe C, Jayasuriya-Illesinghe V, Ganesan M, Sivayogan S, et al. Intimate partner violence in the post-war context: women's experiences and community leaders' perceptions in the Eastern Province of Sri Lanka. *PLoS ONE* [Internet]. 2017 Mar [cited 2017 Nov 14]; 12(3):1-16. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28362862>
 26. Instituto Brasileiro de Geografia e Estatística. Censo 2010. Brasília, DF: IBGE; 2010.
 27. Schraiber LB, D'Oliveira AFPL, França Júnior I, Diniz S, Portella AP, Ludermir AB, et al. Prevalence of intimate partner violence against women in regions of Brazil. *Rev Saúde Pública* [Internet]. 2007 Oct [cited 2017 Nov 16]; 41(5):797-807. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-89102007000500014
 28. Babor TF, Higgins-Biddle JC, Saunders JB, Monteiro MG. *The Alcohol Use Disorders Identification Test: guidelines for use in primary care*. Geneva: WHO; 2001.
 29. Mendéz EB. Uma revisão brasileira do AUDIT (Alcohol Use Disorders Identification Test). [dissertação] Pelotas, RS: Universidade Federal de Pelotas, Departamento de Medicina Social; 1999.
 30. Smart RG, Arif A, Hughes PH, Mora MEM, Navaratnam V, Varma VK, et al. Drug use among non-student youth. *WHO Offset Publication* [Internet]. 1981 [cited 2017 Nov 14]; 60:1-58. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/7336828>
 31. Hasselmann MH, Lopes CS, Reichenheim ME. Confiabilidade das aferições de estudo sobre violência familiar e desnutrição severa na infância. *Rev Saúde Pública* [Internet]. 1998 Oct [cited 2018 Feb 19]; 32(5):437-46. Available from: <https://doi.org/10.1590/S0034-89101998000500006>
 32. Straus MA, Hamby SL, McCoy SB, Sugarman DB. The revised Conflict Tactics Scales (CTS2): development and preliminary psychometric data. *J Fam Issues* [Internet]. 1996 May [cited 2017 Nov 14]; 17(1):283-316. Available from: <http://journals.sagepub.com/doi/abs/10.1177/019251396017003001>
 33. Moraes CL, Hasselmann MH, Reichenheim ME. Adaptação transcultural para o português do instrumento "Revised Conflict Tactics Scales (CTS2)" utilizado para identificar violência entre

- casais. *Rev Saúde Pública* [Internet]. 2002 [cited 2018 Feb 19]; 18(1):163-76. Available from: http://www.scielo.br/scielo.php?pid=S0102-311X2002000100017&script=sci_abstract&tlng=pt
34. Alexandra C, Figueiredo B. Versão portuguesa das “Escalas de Táticas de Conflito Revisadas”: estudo de validação. *Psicol: Teor Prat* [Internet]. 2006 [cited 2017 Nov 14]; 8(2):14-39. Available from: <http://editorarevistas.mackenzie.br/index.php/ptp/article/view/1045/>
 35. Gilchrist EA, Ireland L, Forsyth A, Godwin J, Laxton T. Alcohol use, alcohol-related aggression and intimate partner abuse: a cross-sectional survey of convicted versus general population men in Scotland. *Drug Alcohol Rev* [Internet]. 2017 Jan [cited 2017 Nov 17]; 36:20-3. Available from: <https://doi.org/10.1111/dar.12505>
 36. Radcliffe P, D’Oliveira AFPL, Lea S, Figueiredo WS, Gilchrist G. Accounting for intimate partner violence perpetration. A cross-cultural comparison of english and brazilian male substance users’ explanations. *Drug Alcohol Rev* [Internet]. 2017 Aug [cited 2017 Nov 17]; 36:64-71. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298038/>
 37. Silva JMM, Lima MC, Ludermir AB. Intimate partner violence and maternal educational practice. *Rev Saúde Pública* [Internet]. 2017 Apr [cited 2017 Nov 17]; 51(34):1-11. Available from: <https://doi.org/10.1590/s1518-8787.2017051006848>
 38. Shuman SJ, Falb KL, Cardoso LF, Cole H, Kpebo D, Gupta J. Perceptions and experiences of intimate partner violence in Abidjan, Côte d’Ivoire. *PLoS ONE* [Internet]. 2016 June [cited 2017 Nov 18]; 11(6):1-12. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4911101/>
 39. Kinyanda E, Weiss HA, Mungherera M, Onyango-Mangen P, Ngabirano E, Kajungu R, et al. Intimate partner violence as seen in postconflict eastern Uganda: prevalence, risk factors and mental health consequences. *BMC Int Health Hum Rights* [Internet]. 2016 Jan [cited 2017 Nov 18]; 16(5):1-11. Available from: <https://bmcinthealthhumrights.biomedcentral.com/articles/10.1186/s12914-016-0079-x>
 40. Tanimu TS, Yohanna S, Omeiza SY. The pattern and correlates of intimate partner violence among women in Kano, Nigeria. *Afr J Prim Health Care Fam Med* [Internet]. 2016 Nov [cited 2017 Nov 18]; 8(1):1-6. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28155317>
 41. Stene LE, Dyb G, Tverdal A, Jacobsen GW, Schei B. Intimate partner violence and prescription of potentially addictive drugs: prospective cohort study of women in the Oslo Health Study. *BMJ Open* [Internet]. 2012 Jan [cited 2017 Nov 18]; 2:1-11. Available from: <https://doi.org/10.1136/bmjopen-2011-000614>
 42. Nouri R, Nadrian H, Yari A, Bakri G, Ansari B, Ghazizadeh A. Prevalence and determinants of intimate partner violence against women in Marivan County, Iran. *J Fam Viol* [Internet]. 2012 May [cited 2017 Nov 18]; 27(5):391-9. Available from: <https://link.springer.com/article/10.1007/s10896-012-9440-6>
 43. Jayasuriya V, Wijewardena, K, Axemo P. Intimate partner violence against women in the capital province of Sri Lanka: prevalence, risk factors, and help seeking. *Violence Against Women* [Internet]. 2011 Aug [cited 2017 Nov 19]; 17(8):1086-102. Available from: <https://doi.org/10.1177/1077801211417151>
 44. Graham K, Bernards S, Wilsnack SC, Gmel G. Alcohol may not cause partner violence but it seems to make it worse: a cross national comparison of the relationship between alcohol and severity of partner violence. *J Interpers Violence* [Internet]. 2011 May [cited 2017 Nov 20]; 26(8):1503-23. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3142677/>
 45. Ally EZ, Laranjeira R, Viana MC, Pinsky I, Caetano R, Mitsuhiro S, et al. Intimate partner violence trends in Brazil: data from two waves of the Brazilian National Alcohol and Drugs Survey. *Rev Bras Psiquiatr* [Internet]. 2016 Apr-June [cited 2017 Nov 20]; 38(2):98-105. Available from: <https://doi.org/10.1590/1516-4446-2015-1798>

46. Caldentey C, Tirado-Muñoz J, Ferrer T, Fonseca F, Rossi P, Mestre-Pinto JI, et al. Intimate partner violence among female drug users admitted to the general hospital: screening and prevalence. *Adicciones* [Internet]. 2017 [cited 2017 Nov 20]; 29(3):172-9. Available from: <http://www.adicciones.es/index.php/adicciones/article/view/738>
47. Marangoni SR, Oliveira MLF. Triggering factors for drug abuse in women. *Texto Contexto Enferm* [Internet]. 2013 July-Sept [cited 2017 Nov 20]; 22(3):662-70. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-07072013000300012&lng=en&nrm=iso&tlng=en
48. Andrews-Chavez JY, Lee CS, Houser RF, Falcon LM, Tucker KL. Factors associated with alcohol consumption patterns in a Puerto Rican urban cohort. *Public Health Nutrition* [Internet]. 2015 Feb [cited 2017 Nov 20]; 18(3):464-73. Available from: <https://doi.org/10.1017/S1368980014000433>
49. Balachova T, Bonner B, Chaffin M, Bard D, Isurina G, Tsvetkova L, et al. Women's alcohol consumption and risk for alcohol-exposed pregnancies in Russia. *Addiction* [Internet]. 2012 Jan [cited 2017 Nov 20]; 107(1):109-17. Available from: <https://doi.org/10.1111/j.1360-0443.2011.03569.x>
50. Souza MRR, Oliveira JF, Nascimento ER. Women's health and the phenomenon of drugs in brazilian magazines. *Texto Contexto Enferm* [Internet]. 2014 Jan-Mar [cited 2017 Nov 20]; 23(1):92-100. Available from: <https://doi.org/10.1590/S0104-07072014000100011>
51. Mendes MC, Cunha JRF, Nogueira AA. A mulher e o uso de álcool. *Rev Bras Ginecol Obstet* [Internet]. 2011 Nov [cited 2017 Nov 21]; 33(11):323-7. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0100-72032011001100001
52. Barroso LC, Pérez, LLR, Caballero FLP, Redondo FJF, Berges DF, Ramírez FB. Tabaquismo y riesgo coronario en la población de un centro de salud: estudio de cohortes retrospectivo. *Rev Esp Salud Pública* [Internet]. 2017 Jan [cited 2017 Nov 21]; 91:1-6. Available from: <https://medes.com/publication/119149>
53. Malta DC, Oliveira TP, Vieira ML, Almeida L, Szwarcwald CL. Use of tobacco and exposure to tobacco smoke in Brazil: results from the National Health Survey 2013. *Epidemiol Serv Saúde* [Internet] 2015 Apr-June [cited 2017 Nov 21]; 24(2):239-48. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S2237-96222015000200239&lng=en&nrm=iso&tlng=en
54. Caixeta, R. Current tobacco use and secondhand smoke exposure among women of reproductive age – 14 countries, 2008-2010. *Morb Mortal Wkly Rep* [Internet]. 2012 Nov [cited 2017 Nov 21]; 309(4):336-8. Available from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6143a4.htm>
55. Sullivan TP, Flanagan JC, Dudley DN, Holt LJ, Mazure CM, McKee SA. Correlates of smoking status among women experiencing intimate partner violence: substance use, posttraumatic stress, and coping. *Am J Addict* [Internet]. 2015 Sept [cited 2017 Nov 21]; 24(6):546-53. Available from: <https://doi.org/10.1111/ajad.12261>
56. Afifi TO, Henriksen CA, Asmundson GJ, Sareen J. Victimization and perpetration of intimate partner violence and substance use disorders in a Nationally Representative Sample. *J Nerv Ment Dis* [Internet]. 2012 Aug [cited 2017 Nov 21]; 200(8):684-91. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/22850303>
57. Curandi CB, Todd M, Mair C. Discrepant patterns of heavy drinking, marijuana use, and smoking and intimate partner violence: results from the California Community Health Study of Couples. *J Drug Educ* [Internet]. 2015 [cited 2017 Nov 21]; 45(2):73-95. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/26464462>
58. Sullivan TP, Khondkaryan E, Santos NP, Peters EN. Applying experience sampling methods to partner violence research: safety and feasibility in a 90-day study of community women. *Violence Against Women* [Internet]. 2011 Feb [cited 2017 Nov 21]; 17(2):251-66. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/21307033>

59. Dichter ME, Cerulli C, Bossarte RM. Intimate partner violence victimization among women veterans and associated heart health risks. *Womens' Health* [Internet]. 2011 July-Aug [cited 2017 Nov 21]; 21:190-4. Available from: <https://doi.org/10.1016/j.whi.2011.04.008>
60. Acosta DF, Gomes VLO, Oliveira DC, Gomes GC, Fonseca AD. Ethical and legal aspects in nursing care for victims of domestic violence. *Texto Contexto Enferm* [Internet]. 2017 Aug [cited 2017 Nov 21]; 26(3):1-9. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-07072017000300311&lng=pt&nrm=iso&tlng=en

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CONFLICT OF INTEREST

There is no conflict of interest.

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